

THE UKRAINIAN QUANDARY III

Hughes Economics (HE) – April 2022

In the latest issue of *Project Syndicate* (March 31, 2022), Nina L. Krushcheva (professor at *The New School* and grand-daughter of Nikita Krushchev) outlined four possible scenarios for the future of the Ukraine invasion in the article *Putin’s War Will Destroy Russia*. Note that some outcomes do not specify how the war ends, just that the outcome occurs.

- NC : Russia uses nuclear and/or chemical weapons.
- PR : Putin removed from power.
- UC : Ukraine concedes some territory to Russia and war ceases.
- OS : Ongoing struggle for control of Ukraine.

Probability determination follows the procedures in *A New Approach to Probability Assessment* at <https://doi.org/10.17265/1537-1506/2022.01.003> (or available on this website) with $2^{(4-1)} = 8$ candidate distributions generated from the pairwise ranges and further analyzed. The pairwise values used in the table below have NC equally likely with PR and OS equally likely with UC. The outcome UC is judged to be between 4 and 5 times more likely than either NC or PR.

PROBABILITIES ON POSSIBLE SCENARIOS FOR THE UKRAINIAN INVASION

SCENARIO	Pairwise Values		Probabilities		Current More Likely Value
	Low	High	Average	Percent	
NC	1.00	1.00	0.0917	9	Base = 1.00
PR	1.00	1.00	0.0917	9	9/9 = 1.00
UC	4.00	5.00	0.4083	41	41/9 = 4.56
OS	1.00	1.00	0.4083	41	41/41 = 1.00
			1.0000	100	

The spreadsheet *ANAPA4.xlsx* can be downloaded from this website to calculate probabilities as in the table above. Alternatively, distributions can be calculated from the Low and High cumulative pairwise values then averaged as in the table below. Probabilities can be calculated in the spreadsheet *LoHiProbs.xlsx*.

PROBABILITIES USING ONLY THE LOW AND HIGH PAIRWISE VALUES

SCENARIO	Cumulative Pairwise Values		Distributions		Average Probability
	Low	High	Low	High	
NC	1.00	1.00	0.10	0.0833	0.0917
PR	1.00	1.00	0.10	0.0833	0.0917
UC	4.00	5.00	0.40	0.4167	0.4083
OS	4.00	5.00	0.40	0.4167	0.4083
	10.00	12.00	1.00	1.0000	1.0000

The above “ballpark” distributions could be adjusted by the decision-maker to say 10%, 10%, 40% and 40% respectively. Or possibly 8%, 12%, 40% and 40% if PR, on reflection, is judged to be 50% “more likely” than NC. Calculated probabilities as in spreadsheets are not necessarily the final word.